

AP Biology 2018-2019

Summer Assignment

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Below are the components of your summer assignment. They must be completed, and submitted BY THE DATE DUE. Each component has been carefully explained later in this document. Do not wait until the last minute....please. These will be the first grades for the fall term.

Assignment	Date Due	Point Value
Letter of Introduction	June 30, 2018	20
Essay (submit by email)	July 30, 2018	30
Summer Reading Project	Obtain book by June 30	100
	Finish the book by July 25 th then email me for the rest of the instructions	
Prior Knowledge Review	August 20, 2018 @ the start of class	50
	Total	200 pts

The Letter of Introduction

Purpose: I would like to know some basic things about you prior to our first day on this adventure. Keep in mind that AP Biology has college level expectations, so your letter should reflect that level of skill and respect. Some of the things I'd like to know:

- Why are you taking AP Biology?
- Realistically, what score do you expect on the AP exam?
- What are your career plans?
- What topics in Honors Biology did you enjoy most and why?

The Essay

Purpose: I need to see your writing skills. Show me your best word usage, grammar, sentence structure, paragraph construction, etc. I WILL grade this as college level work. Usually, the sciences use APA format, but in regards to essay writing (such as this) use MLA.

Instructions:

- A. Choose one topic from below.
- B. Research the topic thoroughly.
- C. Write a 700-800 word informative essay.
- D. Submit it to me via email by the due date indicated previously.
- E. Use no fewer than five resources, properly cited.
- F. NOTE—EVERYTHING you state, MUST be supported with REAL, SCIENTIFIC evidence!!!

Essay Topics:

1. Anthrax as a bio-chemical weapon-Why is this still a popular choice for those wishing to inflict terror? What further safeguards can be put in place?
2. Hormones in pregnancy-Discuss and examine the hormonal changes that occur during pregnancy, particularly in the first trimester.
3. Gestation period-Contrast and compare the gestation period within humans, against other mammals. Why is there a difference in time-period?

4. Seahorses – Seahorses are rare in the fact that it is the male who carries the fetus. Explore the biological components that make seahorses different.
5. Look at the impact of alcohol on the human body over a long period of time, in particular pay attention to the central nervous system.
6. Multiple abortions – How does having multiple abortions impact a woman's ability to carry a child to full term in future. Are there any physiological implications?
7. Is homosexuality genetic? Yes, this is a controversial topic which makes exploring it all the more interesting.
8. Ebola – Is there even the remote possibility that terrorists could get their hands on this and turn into a biological weapon? How can this be prevented? Is enough about Ebola understood?
9. What is behind the decline in the otter population worldwide?
10. Does drinking moderate to high levels of coffee or coca cola increase your likelihood of getting diabetes?

Summer Reading Project

Required reading: **The Emperor of All Maladies: A Biography of Cancer,**

by Siddhartha Mukherjee

ISBN # 978-1-4391-0795-9

Purpose: Reading Biology related literature other than the textbook is a NECESSITY. When writing FRQ exam answers, having a breadth and depth of knowledge for enhancement, creates a more complete picture of your understanding.

Instructions:

Once you have finished reading the book, email me. I will send you the information necessary to complete this portion of your assignment.

Prior Knowledge Review

Purpose: The AP Biology course, as described by the College Board[®], has an expectation that your foundational knowledge of Biology is strong. These principles are not covered in any real depth during the course of the year. It is “understood” that these terms, processes, and theories can be easily recalled as needed.

Instructions:

- A. Complete the questions in the included packet
- B. As you read and answer, REVIEW each concept for a deeper understanding
- C. You may circle the answers you choose
- D. These answers will be transferred to Scantron[®] sheets on the first day of school